

WHAT IS CLAIMED IS:

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1. An image processing apparatus for compositing a plurality of component images into a composite image, comprising:
  - a separating unit that separates a codestream corresponding to each one of the component images into a header portion and a data portion, wherein said codestream is generated by dividing the corresponding one of the component images into one or more rectangular regions, transforming pixel values of the divided one or more rectangular regions with discrete wavelet transform into transform coefficients, and compressing said transform coefficients;
  - a header processing unit that edits said separated header portion so as to composite the component images into said composite image; and
  - a codestream generation unit that generates a codestream corresponding to said composite image by combining the edited headers and the separated data portions.

2. The image processing apparatus as  
claimed in claim 1, further comprising a composite  
designating unit that designates a number of the  
component images to be composited in said composite  
5 image;

wherein

said header processing unit edits said  
separated header portion based on the designated  
number of the component images.

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3. The image processing apparatus as  
15 claimed in claim 2, wherein said composite  
designating unit designates at least one of the  
number of the component images in horizontal  
directions and the number of the component images in  
vertical directions.

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4. The image processing apparatus as  
25 claimed in claim 1, further comprising a code data

processing unit that extracts predetermined code data from said separated data portion.

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5. An image processing apparatus for decompositing a composite image into a plurality of component images, comprising:

10 a separating unit that separates a codestream corresponding to said composite image into a plurality of header portions and a plurality of data portions, wherein said codestream is generated by dividing the corresponding composite image into

15 one or more rectangular regions, transforming pixel values of the divided one or more rectangular regions with discrete wavelet transform into transform coefficients, and compressing said transform coefficients;

20 a header processing unit that edits said separated header portions for a plurality of new codestreams corresponding to said component images; and

25 a codestream generation unit that generates the new codestreams corresponding to said component

images by combining the edited headers and the corresponding separated data portions.

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6. An image forming apparatus, comprising:  
an image input unit that reads an image of  
a document;

10 an image compression coder unit that  
generates a single codestream by dividing the read  
image into one or more rectangular regions,  
transforming pixel values of the divided one or more  
rectangular regions with discrete wavelet transform  
15 into transform coefficients, and compressing said  
transform coefficients;

the image processing apparatus as claimed  
in claim 1; and

20 a printer engine that forms an image on a  
recording medium based on each codestream generated  
by said codestream generation unit of said image  
processing apparatus.

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7. A computer program that causes a computer to composite a plurality of component images into a composite image, comprising the steps of:

separating a codestream corresponding to  
5 each one of the component images into a header portion and a data portion, wherein said codestream is generated by dividing the corresponding one of the component images into one or more rectangular regions, transforming pixel values of the divided one or more  
10 rectangular regions with discrete wavelet transform into transform coefficients, and compressing said transform coefficients;

processing said separated header portion so as to composite the component images into said  
15 composite image; and

generating a codestream corresponding to said composite image by combining the edited headers and the separated data portions.

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8. The computer program as claimed in claim  
7, further comprising the step of designating a  
25 number of the component images to be composited in

said composite image;  
    wherein  
        said separated header portion is edited  
        based on the designated number of the component  
5     images.

10           9. The computer program as claimed in claim  
8, wherein at least one of the number of the  
component images in horizontal directions and the  
number of the component images in vertical directions  
are designated.

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10. The computer program as claimed in  
20 claim 7, further comprising the step of extracting  
predetermined code data from said separated data  
portion.

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11. A computer program that causes a computer to decompose a composite image into a plurality of component images, comprising the steps of:

- 5 separating a codestream corresponding to said composite image into a plurality of header portions and a plurality of data portions, wherein said codestream is generated by dividing the corresponding composite image into one or more
- 10 rectangular regions, transforming pixel values of the divided one or more rectangular regions with discrete wavelet transform into transform coefficients, and compressing said transform coefficients;
- 15 editing said separated header portions for a plurality of new codestreams corresponding to said component images; and
- 20 generating the new codestreams corresponding to said component images by combining the edited headers and the corresponding separated data portions.

25 12. A computer readable recording medium

storing the computer program as claimed in claim 7.